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Liberalisation of Air Transport in Europe:
The Survival of the Fittest?

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LIBERALISATION OF AIR TRANSPORT IN EUROPE:
THE SURVIVAL OF THE FITTEST?

Peter Nijkamp

Abstract

The paper deals with the expected consequences of deregulation and liberalisation in the European airspace, in particular the effects on the policies of European airlines.

The paper gives an overview of the US deregulation policy and the effects on the American aviation sector. Particular attention is given to the existence of contestable markets.

Next, various freedom rights are discussed from the viewpoint of a joint European airline policy. The likely impacts on European airlines are mapped out. It is concluded that the foreseeable consequences are probably not a replication of the US situation.

Finally, one of the European carriers which has a strong tendency towards global liberalisation and competition, viz. KLM, is discussed in more detail. Various strategic scenarios are presented and analyzed.



1. Towards Free Skies

The aviation sector has traditionally been a protected and regulated industry. The US has been the first country to liberalize the airline industry with the introduction of the Airline Deregulation Act (ADA) in 1978. Since 1983, US based airlines were allowed to determine autonomously the routes, destinations, frequencies and airfares on their domestic flights, while new firms who were fit, willing and able to properly perform air transportation were free to enter the market (Button 1991). The resulting competition stimulated efficiency and innovation in the airline sector and resulted in lower fares and a doubling of demand. At the same time however, congestion in the air and at airports increased, while several airline companies did not survive the rise in competition (resulting in new oligopolistic market structures). The main survivors appear to be, in general, large in size, manage an extensive hub-and-spokes network, own a Computer Reservation System (CRS), are very cost-efficient and have a good capability to manage capacities and fares. The US policy was soon followed by Canada and Australia.

Airline deregulation in Europe has a much slower pace, due to the heterogeneity among European countries, the diversity of air traffic control systems and nationalistic motives for protecting a national carrier. The first deregulation initiatives started on January 1, 1988, while it is foreseen that in a series of steps ('packages') the European airline deregulation policy will be concluded in 1997. The aim of European airline deregulation is to create a unified market in an integrating European network economy resulting in fair competition and sound economic growth, so that the European airline sector moves toward financial viability, reasonable stability and sufficient employment (Button and Banister 1990; Button and Pitfield 1990). The regulatory framework for the aviation sector in Europe will not entirely be dismantled, but will be oriented towards the needs of the European market.

The changing competitive conditions for European airlines have provoked various strategies of European carriers, such as mergers, take-overs and alliances (inside or outside Europe). Airlines have to find new niches in an international market without much protection. In the present paper we will explore in particular possible survival strategies of one player in the European airline market, KLM, against the background of the general deregulation movement commenced in the US and the emerging European deregulation packages. We will evaluate these survival strategies and try to identify a promising and feasible course of action. This paper is organized as follows. We will first give a concise overview of the American airline deregulation movement (Section 2), followed by a description of current European liberalisation initiatives (Section 3). Section 4 will be devoted to a comparison of American and European airline policies. In Section 5 we will map out KLM's position in a liberalizing European airline sector, while Section 6 will be devoted to an evaluation of alternative survival strategies. At the end we will offer some reflective remarks.

2. Deregulating America

Airline policy in the USA was since 1938 governed by the Federal Aviation Act (FAA) and implemented by an independent agency, the Civil Aeronautics Authority (CAA) (later on re-named as the Civil Aeronautics Board (CAB)). The CAA was founded to ensure stability in the aviation market; it regulated inter alia airfares, access (and exit), frequencies, cooperative agreements and competition on various routes (see for details Bailey et al. 1986; Reynolds-Feighan 1992). The US airline market was subdivided into (strictly regulated) trunklines (interstate, continental and intercontinental routes), (less regulated) local service connections (regional routes) and (restricted) charters. As a

consequence, the aviation sector was characterized by route and market specialisation of privileged companies.

In the 1970's the US airline market appeared to be an inefficient, oligopolistic system with high airfares, limited service and limited competition, so that innovative and advanced products did not have a chance (Doganis 1994).

On the other hand, the more liberalized Californian airline market showed that lower airfares and feasible airline operations were certainly possible. As observed by Williams (1993):

"The overwhelming weight of evidence compiled by researchers during the 1960s convinced most observers that the CAB's primary preoccupation with protecting the airlines it had been given jurisdiction of in 1938, could no longer be regarded as being in the public interest. Forty years of tight regulation had resulted in an inefficient, stultified scheduled airline industry."

As a result, the regulation movement started which led to the ADA in 1978. Since 1983 the actual liberalisation started to take place which had drastic implications for the trunkline operators. The expectation was that entry barriers for new firms were low, so that new carriers would force incumbent firms to operate more efficiently. Even though a significant share of the market was oligopolistic in nature, the advocates of airline deregulation claimed that the threat of new entrants would stimulate the existing firms to diminish their monopoly profits (Shearman 1992; Williams 1993). Thus the assumption of contestable markets led to favourable expectations regarding the economic consequences of deregulation. This idea takes for granted that existing firms would permanently be threatened by potential entrants in case of excess profits (see Baumol 1982; Baumol et al. 1988). As a result, fares would be at a competitive level and there would be significant consumer benefits. It is noteworthy that contestable markets assume absence of entry barriers; hence, there will not be room for excess profits and inefficient airline operations and organisations, so that prices will equal marginal costs. It is interesting that perfect competition is not necessary; market clearing can be achieved already when there is one potential entrant who can offer services at a lower price, provided the transaction costs of market entry and exit are negligible (the so-called hit-and-run entry).

The actual airline developments in the US have not always supported the contestable market hypothesis. Many new carriers entered indeed the aviation market, but several did not survive and even various existing firms were forced to leave the market. Clearly, airfares appeared to decline (in real terms approximately 30 percent), the number of routes increased and also the frequency of service appeared to rise. On the other hand, a significant part of the market was conquered by a few giants which - in contrast to the contestable market theory - appeared to have acquired a significant market power as a result of keen strategies (Dodgson 1994; Sinha 1986). The surviving six trunkline carriers are American Airlines, Delta, United Airlines, US Air, Northwest Airlines and Continental. These megacarriers have some 70 percent of the US domestic market. This has resulted in high entry and exit costs for small new firms, so that the basic assumptions of a contestable market are often not fulfilled. The following causes for the market power of existing large carriers can be mentioned.

(a) The development of hub-and-spokes networks

One of the most protectionistic strategies of US carriers has been the development of hub-and-spokes systems which allowed them to reach both economies of density for flight operations in large airline networks and economies of scope by offering to a variety of passengers yet a sufficient flight frequency (Berechman and Sky

1996; Dennis 1994; Hansen 1990; O'Kelly 1986; Shaw 1993). Furthermore, they were able to enter **also** the regional connections by starting **feeder** lines to the major hubs. Larger carriers decided even to build up multi-hub systems. Clearly, hub-and-spokes networks **may** cause inconvenient transfer and **longer** travel times for passengers, while they **may** **create** congestion at hubs. The organisation of **such** networks requires **also** high sunk **costs**, so that market entry for new firms is hardly possible. Furthermore, several large carriers were able to acquire **also** the governance of **many** terminals in airports (management of slots and **gates** via grandfather rights), so that they could **protect** themselves against competition on their own hubs (Barrett 1992). As a **result**, there were **many** obstacles for market entry of potential competitors.

(b) **The development of Computer Reservation Systems (CRS)**

A CRS was traditionally meant to offer travel agencies rapid information and **efficient** booking facilities, but **after** the deregulation it became a marketing tool and hence a power instrument for airlines. Travel information shown on the screen of a travel agency **can** be manipulated by the owner of a CRS, so that the **owner-carrier** gets a privileged position in a booking system. Only megacarriers could **afford** to develop and buy such a system, while other carriers have to **pay** for inclusion in a given CRS, so that a CRS turned into a powerful instrument. Furthermore, through the information from a CRS it was possible for an airline company to obtain a priority treatment of travel agencies through a bonus system, while the CRS information base was **also** an **effective** marketing tool, especially because of the **access** to information on other airlines' **policies**. One **may** thus conclude that the design of carrier-owned CRS has drastically influenced the concentration degree in the US aviation sector.

(c) **Diversity of fares**

It is interesting that **after** the deregulation an **enormous** diversity of fares on **all** routes emerged, depending on a great **many** travel conditions. According to Wheatcroft and Lipman (1990), even approximately 92 percent of **all** tickets sold in the US in 1987 was a discount ticket. Especially in the initial years of deregulation, smaller firms managed to use advanced **technologies** in order to offer lower fares. The abundance of **price** variations is difficult to be **accessed** on a regular basis in a hub-and-spokes network, so that **lack** of information **may** **preclude** **competitive** behaviour: there is not a single equilibrium **price**, but there multiple **prices** which are determined by the organisation of the market. On top of it, there **may** be cases of cross-subsidisation or predatory pricing **aiming** at eliminating competitors.

(d) **Frequent flyer programmes**

The introduction of **loyalty** programmes in the form of frequent flyer programs (FFP) for frequent customers has created another way of binding passengers to a given carrier, especially on business trips **where** the airfare is paid by the company. In particular for a large carrier this system appeared to **generate** **quite** some extra and stable **demand**, favouring existing airlines and putting up obstacles to new firms. In addition, the information **contained** in the FFP data base offered an inexpensive and **accessible** marketing property for the carrier concerned.

(e) **Codesharing**

Codesharing is not only a software issue, but in **practice** it serves for newcomers

as a way of buying **access** to scarce slots at a given **airport** from a major carrier. For existing **companies** it serves to expand the network by booking and information integration with **feeder** carriers. The **result** of codesharing is **usually** another barrier for a free market entry.

After several years of deregulation in the USA, one may point out various strategies through which the major airlines have tried to **redress** contestability, such as:

- waves of mergers and consolidations;
- **higher** than expected degree of **vertical** integration;
- **dominance** of a hub-and-spoke system;
- **importance** of controlling slots and **gates**;
- the **higher** casualty **rates** of new **entrant** airlines;
- a **rather** complicated fare structure;
- **importance** of a **loyalty** programme;
- important role of travel agents;
- dominant role of computer reservation systems;
- a **persistence** and **success** of predatory pricing.

In **general**, one may say that the American market is **less** contestable than it was thought to be before the deregulation (Button and Swann 1992; Dempsey 1990; Gialloreto 1989; Molloy 1985; Shearman 1992; and Williams 1993).

We may conclude that the deregulation has significantly altered the American aviation market. The airline sector has become **much** more **efficient**. **Prices** have declined, route choice has increased, and **frequencies** have increased as **well**. As a **consequence**, the **demand** has drastically **risen**. At the same **time**, it might need to be recognized that the monopoly power of large carriers has increased and that the profitability of airline operations is **still** marginal. The market is not fulfilling the criteria for contestability, but has • with some exceptions • largely moved into an oligopoly of megacarriers which were able to survive thanks to hub-and-spokes **policies**, CRS and slot strategies, **efficient** organisation, **FFP's**, codesharing, and intransparent airfare systems. The question is now what the likely consequences are for European carriers in case of a completely **liberal** European airline market. This will be **discussed** in **Section 3**.

3. Liberalising Europe

The American deregulation movement has set the tone for a liberalisation of the European aviation sector. Although **also** the European airline business was fraught with **many** unnecessary restrictions, the **nature** of these constraints was different from those in the US: the European protectionist measures were **much** more influenced by nationalistic motives (**see** Pryke 1991). In the context of an integrating European market there was a **much** more pronounced need to remove nationalistic barriers associated with the protection of national flag carriers (**see also** Button 1995; McGowan and Seabright 1989; Reynolds-Feighan 1995). This implied that the **nature** of a restructuring in the airline sector was **rather** different, as national interests had to be dovetailed, which **means** e.g. a ban on **state** subsidies for national carriers (**see** Comité des Sages 1994). Consequently, a straightforward transferability of US experiences to the European context is not **well** possible (**see also** Good et al. 1993). We will now first give a brief sketch of the aviation policy in Europe in the past decade.

The Paris Convention in 1919 took for granted that states have sovereign rights in the airspace above their territory. Consequently, direct government intervention in air transport became inevitable, so that the free trade laissez faire approach during the first years of aviation was gradually replaced by an incomplete pattern of bilateral agreements between countries to or over which those airlines wished to fly. Countries can give airlines from other countries various forms of freedom of air as set out in the Chicago Convention of 1944. These freedoms of air are (see Nijkamp and Hilhorst 1995):

- 1 st freedom: The right to fly over the territory of a contracting state without landing;
- 2nd freedom: The right to land on the territory of a contracting state for non-commercial (technical) reasons;
- 3rd freedom: The right to transport passengers, cargo and mail from the state of registration of the aircraft to another contracting state;
- 4th freedom: The right to take on board passengers, cargo and mail in another contracting state, and to transport them to other countries of registration of the aircraft;
- 5th freedom: The right to transport passengers, cargo and mail between two other states as a continuation of, or a preliminary to, the operation of the 3rd and 4th freedom rights;
- 6th freedom: The right to take passengers, cargo and mail in one state, and to transport them to a third state after a stop-over in the aircraft's state of registration and vice versa;
- 7th freedom: The right to transport passengers, cargo and mail between to other states on a service which does not touch the aircraft's state of registration;
- 8th freedom: The right to transport passengers, cargo and mail within another state between the airports of that state (cabotage).

In the mid 1980s the European airspace had become an inefficiently operated and congested transport area (Doganis 1994, Majumbar 1994), dominated by flag carriers, monopolistic rules, bilateral market divisions and high airfares. In this context, Greece, Spain and France appeared to be proponents of strict regulation, as this would lead to market stabilisation, operational safety and service provision to peripheral regions. In practice however, this policy turned out to be a purely nationalistic protection policy. It is clear that this situation was a major impediment to the European common market, so that in the second part of the 1980s - following the U.S. deregulation movement - various initiatives were started in order to deregulate the airline market, to liberalize aviation policy and to harmonize airline operations (e.g. through integrated airline control centres such as Eurocontrol) (see also Nijkamp et al. 1994). The established system of scheduled airlines with their distribution of air traffic capacity, their double approval system and the strict regulation of routes, flight frequency and fare systems became increasingly criticized, in particular since it was not in the interest of the consumer.

Especially the increasing competition from the leisure aviation market (in particular, charter flights) and the increasing penetration of non-European airlines on European markets (caused inter alia by a non-coordinated European aviation policy) led to a change in the protected European aviation sector.

According to Doganis (1994) three driving forces may be mentioned for the emerging liberalisation process in the European aviation market, viz. the American need to relax strict regulations on the Transatlantic market by offering 'open skies' agreements (in the same vein as domestic deregulation), the successful liberal revision of the bilateral agreements between the UK and the Netherlands (leading to more competition and more

traffic at much lower prices on the Amsterdam-London sector), and • last but not least • the EU initiatives to favour liberalisation in the airline sector.

After some first hesitant attempts at improving the European aviation market by adopting the First (1979) and the **Second** (1984) Civil Aviation Memorandum by emphasizing the need for a Community liberalisation and harmonisation policy, a more radical decision was made to reorganize the European aviation sector in a series of successive packages (see Wheatcroft and Lipman 1990):

- (i) **package 1** (1 January 1988)
 - a revision of capacity allocation (55-45 in stead of 50-50)
 - marginal **automatic** approval of the 5th freedom right
 - more flexibility of fares (within some limits)
 - application of EC competition rules to the aviation sector (**except** for some Mediterranean countries)
- (ii) **package 2** (1 November 1990)
 - compulsory award of concession to **any** new airline satisfying **normal** aviation criteria
 - right for **any** airline company in the EC to fly to **any** other international **airport** in the EC
 - further revisions of capacity allocation
 - further relaxation of 5th freedom right
 - further flexibility in setting fares (e.g. by further dismantling the double approval systems)
 - more possibilities for multiple designations (more airlines from the same country on the same route)
- (iii) **package 3** (1 January 1993)
 - entire freedom of tariffs for charters and cargo, and **almost** entire freedom of tariffs for scheduled flights
 - abolishment of capacity constraints or distributions
 - airline **companies** need a technical permission (operational concession), but **may** be based in **any** EU country; they have to be financially sound and their shares have • in majority • to be owned by EU citizens
 - market **access** is free, **except** for **cabotage**, although member states **may** impose public service duties on airlines for isolated or **less** developed regions
- (iv) **package 4** (April 1997)
 - introduction of the freedom of **cabotage**
 - entire liberalisation of the European aviation sector (**except** for temporary **specific** cases)
 - extension of European liberalisation to non-EU countries **such** as Norway or Switzerland (and in the medium term to the 6 Central-European countries).

In a period of some ten years the European aviation market has thus become more **mature**. This long lasting approach has paved the road towards an official European policy to gradually deregulate and liberalize the European airline sector in a stepwise way via the above mentioned series of packages (see **also** Berechman and Reynolds-Feighan 1995). At present, the third package is thus **still** prevailing, which **means** that there **are** no capacity restrictions anymore and that there is **3rd, 4th, 5th, 6th** and 7th freedom in the EU. As indicated above, the 8th freedom (**cabotage**) will be liberalized in April **1997**; only

the Greek islands and the Azores are not part of this agreement. Until April 1997, community airlines can fill a maximum of 50% of the capacity in a stopover in another member state.

Airlines are in the mean time developing various kinds of new strategies to conquer a larger market share, e.g. through mergers, take-overs, participating strategies, strategic alliances etc. This means that aviation policy in the EU has to find a balance between competitive price wars (e.g., price dumping, predatory pricing) and a market structure without a high monopoly degree. It is in the interest of all parties to have free access with a sufficient number of competitors, a financially viable aviation sector with a reasonable degree of stability, and a capacity that is in agreement with the tariff structure. Some regulations will be needed to ensure a technically feasible and socially acceptable aviation market (e.g., standardisation, connectivity to lagging peripheral areas). European liberalisation seems to imply not necessarily deregulation, but re-regulation of national competences. This is a difference with respect to the US, as will be indicated in the next section.

4. Comparing Europe and the US

The gradual transformation of the European air transport market is clearly not an easy policy and far more complicated than the US air market. In fact, the main aim of the EU aviation policy is not deregulation, but fair competition and economic growth for all member states. Consequently, the European situation differs from that in the US. Below, the major differences between the European and American aviation sector are outlined (see also Torn 1995).

European Union

- ☐ the EU comprises 15 countries, with a diversity of languages, national carriers, and indigenous economic, technological and political interests; most flag carriers are also (largely) state-owned
- ☐ most flights are international
- ☐ the European market is small and the population density is relatively high, so that the average distances are relatively short (approx. 750 kilometres) with less possibilities for hub-and-spokes networks.
- ☐ given the average relatively small air distances, there is much competition from rail and road
- ☐ the charter market is a large market; it is highly competitive and has low fares
- ☐ the power of airlines is limited, as they do not own terminals of airports
- ☐ CRS are usually owned by multiple companies (without free access to company-specific information)
- ☐ the cost level is normally very high in Europe (as a result of wages, landing fees, kerosine prices, short distances, and operational restrictions in the European airspace).

United States

- ☐ the US is a single, mono-lingual nation without one clearly identified flag carrier
- ☐ the direct government involvement in the aviation sector is much less: there are no state or federal companies and no direct state or federal subsidies (except some temporary financial relaxation based on the so-called Chapter 11).

- the majority of flights is domestic and hence less hampered by protectionist measures
- the air traffic control system in the US is more harmonized and hence more efficient than the fragmented European system
- the population centres are much further apart, so that the average flight distance in the US is about 1300 kilometres (which allows for the creation of hub-and-spokes networks).
- because of long distances and by poorly developed railway systems, there is no clear multi-modal competition for the airlines (except the car for medium-range distances)
- the charter market in the US is not a well developed segment of the aviation sector
- terminals and CRS are often owned by airlines, which gives them a high controlling power for slots and gates at airports
- the general cost level is rather low (often accompanied by a low service level on board).

As a consequence of these differences it has been for the US less difficult to undertake a regulatory reform. The specific national features of the European aviation industry has made it more difficult to respond efficiently to the new challenges. Furthermore, the European market is smaller than the US market, so that it may be difficult to benefit sufficiently from economies of scope and of density under the current regimes (Williams 1993). Nevertheless, there will be a permanent pressure for more efficiency in the airline sector in Europe, so that the system of flag carriers will be put under severe pressure in the future.

After this general overview of differences between the European and the US aviation sector, the question may be raised in how far lessons learned from the US experiences can be transferred to Europe. We will follow here Button (1996) who made the observation that the US experiences have limited relevance for the EU policy due to the following reasons:

- the **domestic/international traffic split** (about 53% of departures by EU registered airlines were international compared to about 15% for US registered carriers).
- the **non-scheduled market** (some 25% of passengers carried within the 22 member countries of the European Civil Aviation Conference were by charter compared to some 1% of the domestic US partners)
- **market size** (only some 20% of the 75 main routes in Europe have a flying time of more than two hours)
- **production efficiency** (the average labour productivity of European airlines is far below the US average; for example, BA and KLM, the most efficient ones in the European market, are still only about 70% as efficient as their US counterparts)
- **ownership of airlines** (the public sector participation in European airlines is somewhat declining but still excessively high compared to the US, where the aviation industry is in private hands)
- **inter-modal competition** (in recent years, rapid railway systems have meant a severe competition for airlines, but they have also favoured airports that were connected with high speed train services)
- **infrastructure availability** (the increase in travel demand has placed more stress on the capacity of airports and flights corridors, in particular as the air traffic control forms a less uniform patchwork system which is also strongly influenced by military aviation; each country has its own dedicated military airspace)
- **the wider international context** (the EU aviation policy is part of a broader European integration policy, while at the same time there is a strong world-wide tendency to

- remove trade barriers in and between continents all over)
- advantage of hindsight (various negative results of the US experience - such as monopoly power exercised by codesharing, CRS and gate ownerships by carriers - can be coped with in Europe seeking for remedial policy measures, (e.g. alliances rather than takeovers).

It seems thus that European liberalisation will not cause a sudden revolution in the aviation sector, but will rather be characterized by a controlled chain reaction. The various packages are - in light of the great many national interests - fairly balanced, provided they will be strictly applied without any exception. This means that national interests will have to be suppressed to the maximum extent possible. Under such conditions a contestable market may emerge which will force incumbent firms to operate more efficiently. The recent successful strategy of EBA (Euro Belgian Airlines) - offering extremely low fares with a low service level (comparable to South West Airlines in the US) - is an illustration that competitive newcomers may exert a significant market power.

For the time being however, airfares have not shown a drastic decline (except on the Amsterdam - London sector); one needs as a rule of thumb at least three carriers on the same route to induce price competition (but this is not feasible on most European sectors). Only the charter market has demonstrated its ability to reduce prices drastically.

Another concern in the European aviation development is the existence of grandfather rights on existing airports, so that newcomers can hardly obtain landing rights (the recent discussion on the open access to the Paris airport Orly is a good illustration of the fact that even the third EU aviation package is not always respected, when it concerns scarce slots).

In addition, many airports appear to have a monopoly position for groundhandling (checking in, baggage handling), which is often even controlled by the domestic airline. This means high costs and low efficiency (in the EU the costs of groundhandling amount to more than 12% of total costs of airlines). Apart from the low service level offered by a competitor, there is also the problem that this competitor has access to commercially sensitive information of another airline.

In conclusion, there is a wide range of concerns in the European aviation industry which need to be addressed by EU policy-makers. The most prominent ones are:

- competition policy (price dumping, predatory pricing, unfair marketing, manipulation of slots, flight scheduling, cabotage, codesharing, frequent flyer programmes, state subsidies etc.)
- environment (efficient air traffic control, strict safety regulations, efficient groundhandling, modern equipment etc.)
- 0 external policy (uniform exterior policy, world-wide standardised air traffic control, grandfather rights and open skies agreements etc.)
- o congestion in the air (slot allocation, Eurocontrol, satellite communication)
- o harmonisation of regulation (safety, licenses, training of personnel, environment).

The question whether the future European airline system will replicate the American hub-and-spokes model depends on the implementation of the various policy packages and on the way the various above mentioned concerns will be addressed by national and supranational governments in Europe. However, it seems - in the light of the substantial differences between the European and the American aviation market - very unlikely that the future of the European aviation system will be a repetition of the American experience. Clearly, there may be a tendency to a hub-and-spokes system supported by a feeder system, but national interests will most likely prevent the emergence of a few single hubs in Europe. In light of the current tendencies, it seems more likely that a limited number of

globally-oriented hubs will emerge (e.g., Frankfurt, London, Paris, Amsterdam, Rome) accompanied by a set of so-called Eurohubs serving preponderantly the European market.

Thus, some sort of hierarchical aviation system replicating the **economic** and **political** strength of European cities, regions and countries seems to be a plausible **result**. Clearly, there is much more scope for alliances, mergers and take-overs in the European airline industry, but this does not necessarily **mean** the development to a single **hub-and-spokes** network. It is more likely that a patchwork airline system will evolve in which **all** national players are to some extent represented, even though the notion of a national flag carrier **may** become an outdated one in the next century. But the **economic forces** have to **cope** with socio-political **forces**, and the **result may** be a mixed - and partly hierarchical - aviation system in Europe.

5. From Flying Dutchman to Global Carrier

In this - and the next **section** - we will - by way of illustration - **pay** some more attention to one player in the aviation market, viz. KLM. This Dutch-based airline has developed as a pronounced advocate of the free **skies principle**, and therefore it **may** be interesting to **discuss** its policy in greater detail. The company has to face the following developments in the aviation industry:

- ☐ liberalisation in Europe
- ☐ increase of air traffic with declining airfares, more geographical mobility and further globalisation
- ☐ world-wide competition and deregulation
- ☐ increasing privatisation of airlines (e.g., BA, Lufthansa)
- 3 global alliances between various airlines leading to more **economies of scale** and scope.

In order to **cope** with the great **many** recent challenges in the aviation sector, KLM has developed a **rigorous** liberalisation policy, inside and outside Europe. Together with BA, this carrier is a straightforward supporter of freedom in the air (including **all** routes, **prices** and **frequencies**), provided **such** a **liberal** policy will apply to **all** other European airlines. Even the idea of a national flag carrier is in the opinion of KLM outdated; **many** flights inside and outside Europe are nowadays jointly operated with other **companies** (in particular, Northwest Airlines), while **also** a complex net of **feeder** lines has been built up. The overall **objective** of the company is to ensure a sustainable **competitive** position in a global airline system, together with its **many** partners (NWA, Air UK, Transavia etc.). To **achieve** this, it will be necessary to **reduce costs**, to enlarge its market share and to guarantee a **sufficient** profitability. Labour productivity had to increase (more than **50%**), as **well** as **capital** productivity (more than 10%) (**by** introducing a 'three **block** system' for departing and arriving airplanes on most European flights). As a **result**, the growth in European flights amounted to some **55%**, with the **consequence** that European and **intercontinental** flights could be more harmonized and be offered at **competitive prices** due to a quality increase in transfers. On top of it, KLM **also** executed a major restructuring of the company (e.g. outsourcing of non-core business). The company has adopted its most direct and most efficiently operating competitors as a benchmark. Instead of a traditional 'cost-plus' policy the company is now **forced** to use a '**price driven costing**'. Through its Galileo CRS, KLM has adequate insight into the tariff **policies** of its **main** competitors, so that it **can** quickly respond to new developments.

Strategic alliances with other airlines are for KLM a sine qua non in a **highly competitive** market, as **such** alliances will **assist** in fulfilling the following goals:

- to build up a global network (KLM as global carrier)
- 0 to increase both its European and world-wide market share
- to improve its position as a transfer airline
- to raise efficiency and to reduce costs in the whole production chain
- 0 to benefit from density advantages (e.g., hubs policy, negotiation position etc.).

It is noteworthy that many alliance attempts have failed in the recent past (e.g., Sabena, Air Littoral, BA, Alcazar), but various other cooperative agreements and partnerships have become successful, both outside Europe (e.g., NWA, Garuda, ALM) and inside Europe (e.g. Air UK, Transavia, Air Exel, Delta Air Transport, Maersk Air, Austrian Airlines, Tyrolean Airways, Cyprus Airways, Eurowings and Martinair). Thus, the model has been here to look for global partners, regional partners and feeder partners. A major question is of course, how long one has to wait to seek for a more intensive alliance with a larger European partner. Recent alliances (e.g., between Lufthansa and SAS, or between Swissair and Sabena) illustrate that the aviation market in Europe is still in full motion. Therefore, it may be interesting to compare KLM with some US carriers (viz. Delta Airlines (DL), American Airlines (AA) and United Airlines (UA), in order to draw some strategic lessons for the company's long-term policy (see for more details Torn 1995).

indicators	KLM	DL	AA	UA
employees	24,177	71,412	110,000	78,000
number of airplanes	91	550	647	550
annual passengers	11.8 mln	87.4mln	95mln	74mln
passengers kilometres	41,767mln	137,096mln	159,124mln	174,253mln
revenues	7,897mln	21,995mln	25,977mln	23,624mln
yield	107 cents	7.75 cents	8.0 cents	8.1 cents
productivity (mln tonkm per employee)	0.34	3.38	2.27	3.60
occupancy rate	74.4%	64.6%	64.8%	71.2%
critical occupancy rate	69.9%	67.2%	61.5%	68.2%

Table 1. Comparison of performance indicators of KLM, DL, AA and UA

The picture from Table 1 is rather illuminating. It shows clearly that KLM - as a representative of all other European carriers - has a relatively high cost level. This is caused by various factors which are specific for Europe:

- 0 high landing fees and air traffic control fees
- 0 high kerosine costs
- 0 a dominance of a short (and thus relatively costly) routes
- 0 many operational restrictions on flight routes leading to some 20 percent detours
- 0 many additional restrictions and expensive policy measures (e.g., veterinary checks, immigration checks etc.)
- 0 a relatively high congestion level
- 0 less favourable leasing conditions for airplanes
- 0 high salary costs (salaries in the airline sector in the US have decreased in both real and nominal terms).

It is clear that many of these costs are beyond the control of individual carriers in Europe, so that also a liberalisation will not lead to an automatic improvement of the

performance of European airlines. This means that European aviation policy should also address many more issues than just competition policy in the aviation industry. An important question is now how airlines (and in particular KLM) have to respond to these challenges.

6. The Sky is the Limit

The strategic positioning of a relatively small airline in a turbulent global aviation industry is not an easy matter. First, air traffic is largely a derivative of macro-economic and political factors, such as world-wide economic development, industrial globalisation, the emerging leisure society, international peace, intermodal competition etc. Second, the development of the aviation industry is heavily influenced by liberalisation, deregulation and privatisation movements which concern a great deal of actors. Shearman (1992) distinguishes 6 major parties in the aviation sector who all impact on the performance of the sector:

- ☐ the airlines (carriers)
- ☐ the airports (including fixed facilities and groundhandling)
- ☐ air traffic control systems
- ☐ the aircraft industry
- ☐ regulatory bodies (e.g., national governments, EU)
- ☐ travel agents and their operators

Consequently, the exploration of the future development of the airline sector is a complex undertaking which requires the use of various scenarios in order to depict uncertainties and to identify new opportunities.

In the context of our analysis of KLM's future strategies, we distinguish here 5 distinct scenario's (covering a period of some 20 years) which are outside the control of the company but which will influence decisively its future position:

- ☐ Back to Protection (BTP)
- ☐ Status Quo (STQ)
- ☐ Business as Usual (BAU)
- ☐ European Liberalisation (EUL)
- ☐ Global Liberalisation (GLL)

We will now concisely describe these 5 scenario's.

Back to Protection (BTP)

This scenario assumes a change in EU policy towards more traditional protection of flag carriers, based on a strict government intervention (including state owned carriers), *inter alia* via the use of bilateral agreements on tariffs, capacity, frequencies and market access. In that case, KLM would re-assume its role as a national flag carrier, which would lead to a relatively small market position in Europe. Despite some support of Mediterranean countries for this scenario, the viability of this option is rather low.

Status Quo (STQ)

In this scenario the present European aviation situation would be frozen. This means

that **state** subsidies will remain, while individual countries will be responsible for bilateral open skies agreements with non-EU countries. Cabotage will not be **accepted**, and slots will not be re-allocated. The **ATC** system will **also** be a matter of concern. Maintenance of present positions would perhaps be detrimental for most EU countries, so that the probability of implementation of this option is rather low.

Business as Usual (BAU)

This **BAU** scenario takes for granted that the current trends will gradually develop so that more competition will be **introduced**. There is limited expansion of capacity both in the air and on the ground, but here is not **much** scope for newcomers. The system serves mainly to **protect** the incumbent firms. There **may** however, be some new alliances and buy-outs in the European aviation sector. The congestion **will** increase and hence the efficiency will not rise drastically, so that European carriers will face great difficulties in **cop**ing with their American and Asian partners. This scenario is not entirely unlikely, but winning countries would try to prevent it. In addition, the **BAU** scenario would **still** impose many constraints on **KLM's** global carrier goal.

European Liberalisation (EUL)

This scenario takes for granted an entirely **liberal** aviation system in Europe, comparable to the American system. Slots will be open for re-allocation, while airports will rapidly expand their capacity. **Also** grandfather rights will be abandoned. This **means** that the possibilities for a hierarchical hub-and-spokes system in Europe will be enhanced. **State** owned carriers will vanish or be entirely re-organized. Intra-European competition **may** however worsen the **competitive** position of the remaining European carriers with respect to American or Asian carriers. There **will** be significant mergers and take-overs in Europe. This scenario is **rather** far-reaching, but not entirely unrealistic. **It** would imply that at the end there will be a few winners, especially those which have the support of a **global** network (**such** as BA, Lufthansa or KLM).

Global Liberalisation (GLL)

In the **GLL** scenario, the assumption is that the world aviation market will in some 20 years be entirely liberalised. At best there will be multi-lateral agreements between **continents** or major regions. There will be **fierce price** competition, which will **cause** the emergence of global megacarriers which are operating in close cooperation with a wide spectrum of national or regional carriers. **After** a **shake-out** period the European airspace will be dominated by a few (European and **non-European**) airlines. This trend is of course supported by new **ATC** systems, **airport** expansions and slot re-allocation **mechanisms**. This scenario **may** in the long run become a feasible one.

If we position these 5 scenario's in a SWOT (**strength (S)** weakness (**W**), opportunities (**O**) threats (**T**)) diagram from the viewpoint of **KLM's** goal to become a global carrier, we get the following picture (Figure 1).

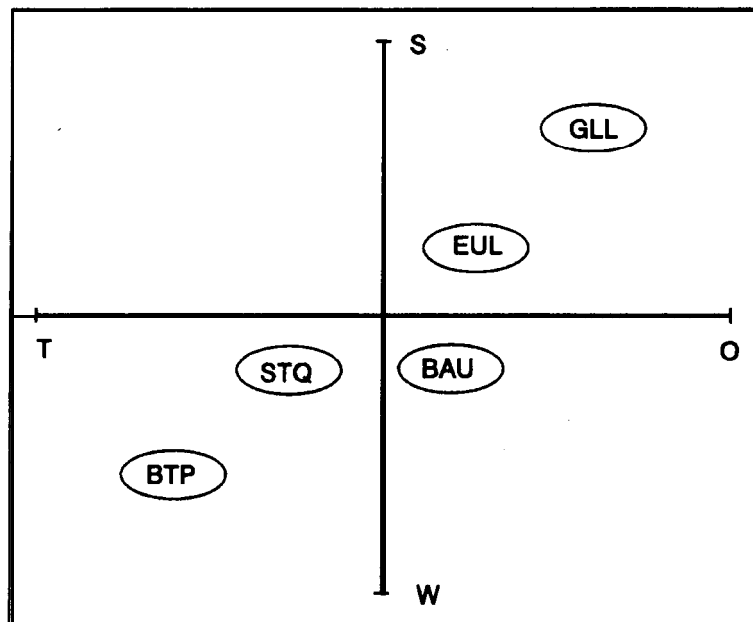


Figure 1. A SWOT picture for KLM

This picture maps out the potential performance of KLM, if it manages to become part of a **Global Airline System**. It would have to strictly go for more **cost** efficiency and effectiveness, *inter alia* by outsourcing, by **building** up alliances with new **feeder** lines etc. A sine qua non is clearly that its American partner, NWA, would **also** survive on the US market and that KLM maintains good relationships with this partner. Despite these risks, it seems plausible for KLM to support the GLL scenario. If **however**, this scenario would become reality, the next question is which **strategic** responses would be expected from KLM.

The **latter** question **can** be answered by using a qualitative **pay** off matrix in a **game-theoretic** sense, **where** the 5 scenario's are put on the one axis and the KLM responses on the other axis (**see** Figure 2). The following responses from the **side** of KLM **can** be envisaged:

- A: remain an independent carrier
- B: merge with a sufficiently large European carrier
- C: become part of a strong European-wide alliance of carriers
- D: form an alliance with one or more sufficiently large Asian carriers
- E: reinforce the **ties** with NWA (**or any** other US carrier)
- F: a combination of B, D and E

The entries of this matrix represent expected qualitative benefits for KLM.

scenario's		KLM responses				
↓	A	B	C	D	E	F
BTP	+		—		--	---
STQ	-	+		0		--
BAU	-	+		+	+	0
EUL	--	+ +	+	+	+	+ +
GLL	---	+ +	+	+	+ +	+ + +

Figure 2. A pay-off matrix for KLM’s strategies

It seems plausible that option F will generate the highest expected benefits for KLM. It is certainly an option that is not without risk, but in light of global developments and corporate objectives of KLM, it seems a realistic and promising choice. This strategy is clearly based on the assumption that the deregulation and liberalisation movement will continue in the next decades and that temporary problems of congestion and environmental pollution will be effectively coped with.

7. Retrospect

The previous analysis lead to the following reflective remarks:

- after liberalisation of the European airspace, new forms of networks are likely to emerge, with a tendency towards functional specialisation of airports organised in a rather hierarchical form
- the organisation of the aviation sector will not directly follow a clear hub-and-spokes system, but rather a system of global hubs (for intercontinental connections), Euro-hubs (for contra-European flights) and regional hubs (acting as a multi-layer feeder system)
- the market share of European carriers is contingent upon the degree of liberalisation and non-protection; in case of a protected aviation sector, each European airline may be sure of a minimum market share (resulting from the protection of the domestic market), but it would also face a maximum market size (imposed by protecting strategies of other countries). This would stabilize the market, but the lack of competition would lead to an inefficiently operating airline industry
- the role of railways as a feeder system ought to be recognized and this might lead to a complete patchwork structure of feeder situations
- ongoing liberalisation will provoke more competition, which will lead to a situation of cost minimization, not only for intra-company operations, but also for the aircraft industry. This may cause more strict competition in this branch of industry, where there will be likely more new entrants from the Asian side.

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